

REMARKS

Claims 1-12 are pending. By this Amendment, Applicants amend claims 1-9 and the specification to correct informalities.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner Ngo in the November 20 personal interview. Applicants' incorporate their separate record of the substance of the interview into the following remarks.

The Office Action objects to the title as not descriptive. Applicants respectfully traverse the rejection.

As discussed during the personal interview, Applicants submit that the title is adequately descriptive. The claimed invention describes a method of manufacturing image display medium, and an image display medium and the title describes the preamble of each independent claim. Furthermore, the title cannot be more descriptive of the invention without becoming excessively long and complex. Because the title is adequately descriptive, Applicants respectfully request that the objection be withdrawn.

The Office Action objects to the disclosure because it fails to sufficiently provide support for the limitation "an adhesive property of the surface of the at least one spacer opposing the another substrate is lower than an adhesive property of the substrates," as recited in claim 8. Applicants respectfully traverse the objection.

Adequate support for the above-described feature of claim 8 may be found on page 18, lines 14-19 of Applicants' specification. During the personal interview, Examiner Ngo expressed her concern that page 18, lines 14-19 of Applicants' specification was confusing since it was unclear which surface of the spacer was "opposing" and which was "upper." As, explained by Applicant's representative, the upper surface of the spacer and the opposing surface of the spacer are the same surface. At least Figures 3A-3D shows that the upper surface of the spacer (i.e., the top of the spacer not fixed to the substrate) is also the surface

opposing the substrate that will subsequently be fixed to the substrate with the spacer.

However, in the interest of clearing up any confusion, by this Amendment, Applicants amend page 18, lines 14-19 of the specification to change "opposing" to "upper." As a result, Applicants respectfully request that the objection be withdrawn.

The Office Action objects to the disclosure because it fails to sufficiently provide support for "superimposing the substrates such that substantially no color material particles are disposed on the surface of the at least one spacer opposing another of the substrates," as recited in claim 7. Applicants respectfully traverse the objection.

As discussed during the personal interview, it is abundantly clear from Applicants' specification that there are many ways in which the substrates may be superimposed such that substantially no color material particles are disposed on a surface of the at least one spacer opposing one of the substrates (page 17, line 9 - page 20, line 20). For example, the adhesive property of the opposed surface of the spacer may be set lower than that of the second substrate. Then the second substrate and spacer may be shaken to substantially remove the color particles from the opposed surface of the spacer (page 18, lines 14-19). Alternatively, as another example, a blade may substantially remove the color material particles from the surface of the spacer opposing the substrate by scraping the particles off that surface of the spacer (page 18, lines 19 - page 19, line 23). As a final example, the color material particles may only be disposed on a surface of substrate between the spacer particles, thereby avoiding the surface of the spacer opposing the substrate (page 19, line 24 - page 20, line 14).

Because the specification provides sufficient support for all of features of claim 7, it is respectfully requested that the objection be withdrawn.

The Office Action objects to claims 1-9 for a number of informalities. The objection is respectfully traversed.

As discussed during the personal interview, the feature of claims 1-9, reciting "disposing a plurality of color material particles distributed substantially uniformly on at least one of the substrates" is consistent with the disclosure in the specification. On page 4, line 22 - page 5, line 14, the specification clearly discloses that a plurality of color materials may be disposed on both of the first and the second substrates, i.e., that they need not be disposed on only one substrate. Therefore, it is respectfully requested that the objection be withdrawn.

During the personal interview, Examiner Ngo responded to this argument by stating that the Figures did not show the situation in which the color material particles are disposed on both substrates. Applicants interpret this assertion as an objection under 37 C.F.R. § 1.83(a). 37 C.F.R. § 1.83(a) requires that each feature of the claims is specified in the drawings. At least, Figures 3A-3D show "disposing a plurality of color material particles distributed substantially uniformly on at least one of the substrates," the at least one substrate being substrate 50a. 37 C.F.R. § 1.83(a) does not require that every conceivable variation of a claim limitation be shown in the drawings. If that were the case, whenever a claim recited "at least one element" from a set of 10 elements, 37 C.F.R. § 1.83(a) would require that there be 10 figures showing each variation of 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 elements. Such is not required.

The Office Action rejects claim 2 under 35 U.S.C §112, second paragraph, as being incomplete for omitting essential steps. The rejection is respectfully traversed.

As discussed at the personal interview, a 35 U.S.C. §112, second paragraph, rejection for failure to interrelate essential elements according to MPEP §2172.01 is only proper where the claim "fails to interrelate essential elements of the invention as defined by Applicant(s) in the specification" (MPEP §2172.01).

First, and most relevant to the rejection, the Office Action correctly points out that the specification does not disclose the alleged steps of charging the color material particles and

spraying the color material particles as being essential to the invention. Because such a disclosure is required by MPEP §2177.01, the rejection is improper.

Furthermore, as it is clear from the specification, there are alternative methods disclosed for attaching particles to a substrate "using an electric field" that do not require charging the particles and then spraying the particles (see page 5, lines 1-14; page 11, lines 5-17; page 12, lines 6-11). For instance, not only charged, but magnetic particles may be used in conjunction with an electric field (page 12, lines 6-11, wherein the electric field results from an electromagnet). Additionally, the specification discloses "attaching," "disposing," "providing," "supplying," "distributing," "placing," "dispensing," and "fixing" the particles to the substrate, each more broad and describing different processes than spraying. Therefore, the alleged steps of charging the color material particles and spraying the color material particles are not essential elements of the invention.

Because the specification does not disclose that the alleged steps of charging and spraying are essential to the invention, and the specification discloses many, more broad alternative steps that may be used, the rejection is improper. Applicants respectfully request that the rejection be withdrawn.

The Office Action rejects claims 1, 7, and 12 under 35 U.S.C. §102(b) over U.S. Patent 6,154,265 to Kamino et al. (hereinafter "Kamino"). The rejection is respectfully traversed.

As discussed during the personal interview, the Patent Office has failed to meet its burden under 37 C.F.R. § 1.104(c)(2) by failing to designate the particular part of the reference relied on for the rejection. The Office Action cites the entire eighth embodiment of Kamino for support of the rejection and only lists substrates 122a, 122b and spacer 125 as equivalent structures. However, the Office Action fails to point out an equivalent structure for the claimed color material particles. Applicant is unable to discern from the rejection or

reference which structure in Kamino is alleged to disclose the colored material particles. Because the Patent Office has failed to meet its burden under 37 CFR Section 1.104(c)(2), Applicants respectfully request that the rejection be withdrawn.

During the personal interview, after a lengthy review of Kamino, Examiner Ngo pointed to column 55, lines 50-67 as allegedly disclosing the claimed colored particles. Applicants note that this portion of Kamino is not explicitly mentioned in the Office Action as disclosing the claimed colored particles, nor does it describe any portion of Figures 16-19, also cited as support for the rejection. As such, should the Examiner maintain a rejection based on this portion of Kamino, it cannot be final, since the rejection relies on a portion of Kamino not previously relied on for the rejection, and therefore constitutes an new grounds of rejection not necessitated by an amendment (MPEP § 706.07(a)).

Furthermore, the color filters 125 of Kamino are formed by curing an ink receptive liquid resin to form solid rectangular color filter panels (col. 46, lines 6-22; col. 46, lines 63 - col. 47, lines 6; col. 39, lines 5-12). According to the new grounds of rejection set forth during the personal interview, the ink is made up of 0.01-0.4 μm particles (col. 55, lines 50-67). However, Kamino still fails to disclose "while maintaining a predetermined amount of the plurality of color material particles distributed on the at least one substrate, superimposing another of the substrates thereon," as recited in claims 1 and 7.

It is clear, from the disclosure of Kamino, that the particles within the ink are baked and cured to form solid 0.4 μm -thick color filters 93 (col. 55, lines 38-47; Fig 11C). As such, the particles are melted to form color filters before the superimposing of any substrate thereon (see Fig. 11E wherein substrate 55 is disposed after the particles melted). Therefore, Kamino cannot disclose "while maintaining a predetermined amount of the plurality of color material particles distributed on the at least one substrate, superimposing another of the substrates thereon," as recited in claims 1 and 7, since the particles are not maintained after the baking

and curing. As such, even based on Examiner Ngo's new grounds for rejection, claims 1 and 7 are patentable over Kamino.

Still further, with respect to claim 12, Kamino does not disclose "a plurality of color material particles disposed between the substrates," as recited in claim 12. Even if Examiner Ngo's new grounds for rejection is considered, the alleged particles are baked and cured to form solid 0.4 μm -thick color filters 93 (column 55, lines 38-47; Fig 11C) before a second substrate 55 is disposed thereon (Fig. 11E). Because the particles are converted to 0.4 μm -thick color filters 93, they can no longer be considered particles. Therefore, at no time are a plurality of color material particles disposed between the substrates in Kamino.

For at least these reasons, even if Examiner Ngo's new grounds for rejection is taken into consideration, claims 1, 7, and 12 are patentable over Kamino under 35 U.S.C. §102(b). Therefore, Applicants respectfully request that the rejection be withdrawn.

The Office Action rejects claims 7 and 8 under 35 U.S.C. §102(b) over U.S. Patent 6,099,630 to Kobayashi et al. (hereinafter "Kobayashi"). The rejection is respectfully traversed.

As discussed during the personal interview, the Patent Office has failed to meet its burden under 37 CFR §1.104(c)(2) by simply referring to Fig. 4 of Kobayashi. Neither Fig. 4 nor the description of Fig. 4 in Kobayashi describe a method of manufacturing an image display medium, but rather describe the display medium itself. Applicants are unable to discern which features of Fig. 4 the Patent Office considers to disclose the steps of the method recited in claims 7 and 8.

Because the Patent Office has failed to meet its burden under 37 CFR §1.104(c)(2), Applicants respectfully request that the objection be withdrawn.

Furthermore, Kobayashi nowhere describes "while maintaining the color material particles on the at least one of the substrates, superimposing the substrates such that

substantially no color material particles are disposed on a surface of the at least one spacer opposing another of the substrates," as recited in claims 7 and 8. The only method step disclosed anywhere in Kobayashi is encapsulating the ink composition in a glass cell comprising two glass plates and glass beads, as spacers (col. 11, lines 27-37 and repeated throughout examples 1-3). The glass cell 42 is formed by two glass plates 36A, 36B and spacers fixed between the substrates by epoxy adhesives. Therefore, the ink composition must have been added to the cell, after the substrates were fixed to form the cell and not before, as recited in claims 7 and 8. Otherwise, if the ink and particles were applied to one of the substrates before the substrates were fixed with epoxy, the ink and particle mixture could not be maintained on the substrate.

Still further, it is clear from Fig. 4 that there is ink 22 and 16 (and hence particles) "on the surface of the spacer (24) opposing one of the substrates." Therefore, even if Kobayashi did disclose the method of manufacturing the device depicted in Fig. 4 of that reference, it still could not anticipate all of the features of claims 7 and 8. As a result, Applicants respectfully request that the objection be withdrawn.

The Office Action provisionally rejects claims 7 and 9 under 35 U.S.C. §102(e) as being anticipated by co-pending published U.S. Patent Application 2002-0050976 A1 to Yamaguchi et al. (hereinafter "Yamaguchi"). Applicants respectfully traverse the rejection.

Under 35 U.S.C. §102(e), Yamaguchi is prior art as of its earliest effective U.S. filing date. The earliest effective U.S. filing date does not include any foreign filing dates to which the Application claims priority (MPEP Section 1106.02(f)(1), example 3). Therefore, for the purpose of 35 U.S.C. §102(e), the effective filing date of Yamaguchi is August 29, 2001.

The present Application claims priority from JP 2001-42597, filed February 19, 2001. In accordance with 37 C.F.R. § 1.55, an English translation of JP 2001-42597 is being prepared and will be submitted. Thus, because Yamaguchi is only effective as prior art under

35 U.S.C. §102(e) as of August 29, 2001, and the claim of priority from the foreign application filed February 19, 2001 will be perfected, Yamaguchi is no longer proper prior art under 35 U.S.C. §102(e) (MPEP Section 2136.05). Therefore, Applicants respectfully request that the rejection be withdrawn upon receipt of the translation.

The Office Action rejects claims 1, 3-6, 10, and 11 under 35 U.S.C. § 103(a) as being unpatentable over Kamino as applied to claims 1, 7, and 12 above. Applicants respectfully traverse the rejection.

The rejection is premised upon the assumption that Kamino discloses all of the features of claims 1, 7, and 12. As discussed above, Kamino does not disclose all of the features of claims 1, 7, and 12. Therefore, the rejection is moot. As a result, Applicants respectfully request that the rejection be withdrawn.

Finally, during the personal interview, Examiner Ngo stated that she felt claims 1-9 are unclear because it is not entirely clear which substrate is being referred to in each element of the claims. By this Amendment, Applicants amend claims 1-9 to more clearly describe the substrates. Applicants assert that the Amendments are merely for clarification and do not alter or narrow the scope of the claims in any way.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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